

- 1- ALL WORK SHALL BE PERFORMED TO MEET THE REQUIREMENTS OF THE GOVERNING EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C.), LOCAL AND STATE CODES AND ANY OTHER APPLICABLE CODES AND STANDARDS.
- 2- ALL WIRING SHALL BE COPPER (CU) THWN INSULATION.  
IF ALUMINUM WIRES ARE USED:
  - A) TO PREVENT OVERHEATING AT CONNECTION POINTS USE OXIDE INHIBITING COMPOUND FOR STRIPPED PORTION OF CONDUCTORS INSIDE CONNECTORS.
  - B) A PREVENTIVE MAINTENANCE PLAN IS NECESSARY TO ENSURE A RELIABLE SERVICE INCLUDING VISUAL INSPECTIONS AND TESTS FOR SPLICES AND CONNECTION POINTS (CORROSION AND TIGHTNESS PRINCIPALLY).  
INSPECTION INTERVALS OF 2 YEARS MAXIMUM ARE STRONGLY RECOMMENDED.
- 3- ALL CIRCUIT BREAKERS SHALL BE RATED AT MINIMUM OF 10,000 AIC.
- 4- PRIOR TO INSTALLATION OF ROUGH ELECTRICAL WIRING, CHECK NEMA PLATE DATA OF ALL EQUIPMENT FOR REQUIRED VOLTAGES, MINIMUM CIRCUIT AMPACITY, AND OVERCURRENT PROTECTION.
- 5- ELECTRICAL CALCULATIONS WERE BASED ON INFORMATION PROVIDED BY ELECTRICAL CONTRACTOR AND OWNER AGENT. ELECTRICAL CONTRACTOR TO VERIFY LOAD FOR EACH CIRCUIT AND ADJUST ACCORDINGLY, CHANGES TO BE REFLECTED IN THE DRAWINGS.
- 6- ALL BRANCH CIRCUITS SHALL BE PROPERLY PHASE BALANCED.
- 7- ALL NEW CONDUCTORS SHALL BE RUN IN CONDUIT (METALLIC TYPE) UNLESS OTHER TYPES CAN BE USED AS PER NEC:  
PVC SCH. 40 WHEN INSTALLED 12" UNDER SLABS ON GRADE OR WHEN EMBEDDED IN CONCRETE WALLS OR SLABS.  
MC CABLE CAN BE INSTALLED ACCORDING TO NEC 330.10 AND 330.12.  
IMC WHEN INSTALLED CONCEALED IN MASONRY WALLS, DRY WALLS OR SUSPENDED CEILINGS,  
ALSO WHEN INSTALLED IN INTERIORS EXPOSED UP TO 8' AFF.  
EMT INTERIORS EXPOSED ABOVE 8' AFF AND AT ANY HEIGHT IN ELECTRICAL, MECHANICAL AND TELECOMMUNICATION ROOMS.

WIRE SIZE	NO FARTHER THAN
1/0 AWG AND SMALLER	100 FEET
FROM 2/0 TO 4/0	80 FEET
OVER 4/0 THRU 350KCMIL	60 FEET
OVER 350KCMIL THRU 500KCMIL	50 FEET
OVER 500KCMIL THRU 750KCMIL	40 FEET

- 8- IF PVC CONDUITS ARE USED FOR UNDERGROUND FEEDERS, A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH N.E.C. 250 - 122 MUST BE INSTALLED AND CONDUIT SIZE INCREASED AS REQUIRED.
- 9- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR INSTALLATION OF MECHANICAL EQUIPMENT.
- 10- RISERS ARE DIAGRAMMATIC ONLY. THEY DO NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION. ELECTRICAL CONTRACTOR TO FIND BEST POSSIBLE ROUTE FOR ALL CIRCUITS.
- 11- THIS DRAWING IS A GUIDE FOR THE INSTALLATION OF ELECTRICAL SERVICE. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.
- 12- OUTLES IN OPPOSITE SIDES ON FIRE RATED WALLS TO BE 24" HORIZ. APART (MIN), AND FIRE PROTECTED.
- 13- ALL SMOKE DETECTORS TO BE LOCATED 3' APART MIN. FROM A/C OUTLETS.
- 14- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR LIGHTING CONTROL SYSTEM IN COMMON AREAS OF THE BUILDING AND VERIFY INSTALLATION FOR OUTLETS, LIGHTING FIXTURES AND ELECTRICAL EQUIPMENT.
15. ALL PANELS SHALL BE CLEARLY LABELED ON THE OUTSIDE FOR QUICK AND EASY IDENTIFICATION. ALL CIRCUITS IN ALL PANELS SHALL BE CLEARLY IDENTIFIED AND SHALL APPEAR WITH COMPLETE INFORMATION (DESCRIPTION OF CIRCUIT, BREAKER SIZE, NUMBER OF POLES AND BREAKER POSITION NUMBERS) ON THE PANEL DIRECTORIES. IN ADDITION, THE VOLTAGE, PHASE AND AMP RATING OF THE PANEL SHALL CLEARLY BE IDENTIFIED ON THE INSIDE DOOR. THE ABOVE APPLIES FOR ANY AND ALL EXISTING TO REMAIN PANEL BOARDS AND CIRCUITS.
16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT FIRE STOPPING MEASURES ARE PROVIDED PER LOCAL BUILDING DEPT. REQUIREMENTS. THE FIRE STOPPING MATERIAL AND ITS INSTALLATION SHALL BE UL APPROVED. ALL FIRE STOPPING MATERIAL SHALL BE NON WATER SOLUBLE.
17. THE CONTRACTOR SHALL THOROUGHLY REVIEW THESE DRAWINGS AND SHALL VISIT AND BECOME FAMILIAR WITH THE JOB SITE AND ALL EXISTING CONDITIONS PRIOR TO BID. ANY QUESTIONS, COMMENTS, DISCREPANCIES OR PERCEIVED AMBIGUITIES SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO BID.

## NEW ELECTRICAL PANEL SCHEDULE "A"

TYPE : PANEL BOARD NEMA 4			10,000 A.I.C.			MAINS : MLO 150 AMP					
MOUNTING : SURFACE						BUS RATING : 150 AMP					
LOCATION : POOL EQUIPMENT ROOM						VOLTAGE : 240/120V-1PHASE-3WIRE-S/N					
DESCRIPTION	WIRE & COND. SIZE	LOAD (V.A.)	POLE TRIP	CKT. No.	A	B	CKT. No.	POLE TRIP	LOAD (V.A.)	WIRE & COND. SIZE	DESCRIPTION
RANGE	EXISTING	10,000	2 50	1 3			2 4	2 30	5,500	EXISTING	DRYER
C/U (NON COINCIDENT)	EXISTING	2,000	2 40	5 7			6 8	2 40	6,100	EXISTING	AHU
WATER HEATER	#6-1"	10,800	2 50	9 11			10 12	1 20	1200	EXISTING	EXISTING
EXISTING	EXISTING	1,500	1 20	13			14	1 20	1200	EXISTING	EXISTING
EXISTING	EXISTING	1,500	1 20	15			16	1 20	1200	EXISTING	EXISTING
LIGHTING	EXISTING	**	1 20	17			18	1 20	1200	EXISTING	EXISTING
LIGHTING	EXISTING	**	1 15	19			20	1 20	1200	EXISTING	EXISTING
				21			22				

NOTE: PROVIDE ARC FAULT INTERRUPTION TYPE CIRCUIT BREAKER FOR ALL RECEPTACLES EXCEPT KITCHEN, GARAGE, GFI & EXTERIOR, ACCORDING NEC 210.

SECTION 406.11.- 15 AND 20A RECEPTACLES TO BE LISTED TAMPER RESISTANT RECEPTACLES.

NOTE :

ELECTRICAL CONTRACTOR TO FIELD VERIFY BRANCH CIRCUIT, POSITION AND CONNECTION. ALL PANELS SHALL HAVE UPDATED BRANCH CIRCUITS LABELS.

(\*\*)GENERAL LIGHT 3 VA/S.F.  
MASTER BATH

### LOAD CALCULATION PANEL

#### NEW LOAD CALCULATION PANEL "B"

AREA FOR PNL "B" S.F. = 1212 S.F. AT 3 VA/S.F. = 3,636 VA

TOTAL GENERAL LOAD= 45,836 VA

A/C LOAD AT 100% = 6,100 VA

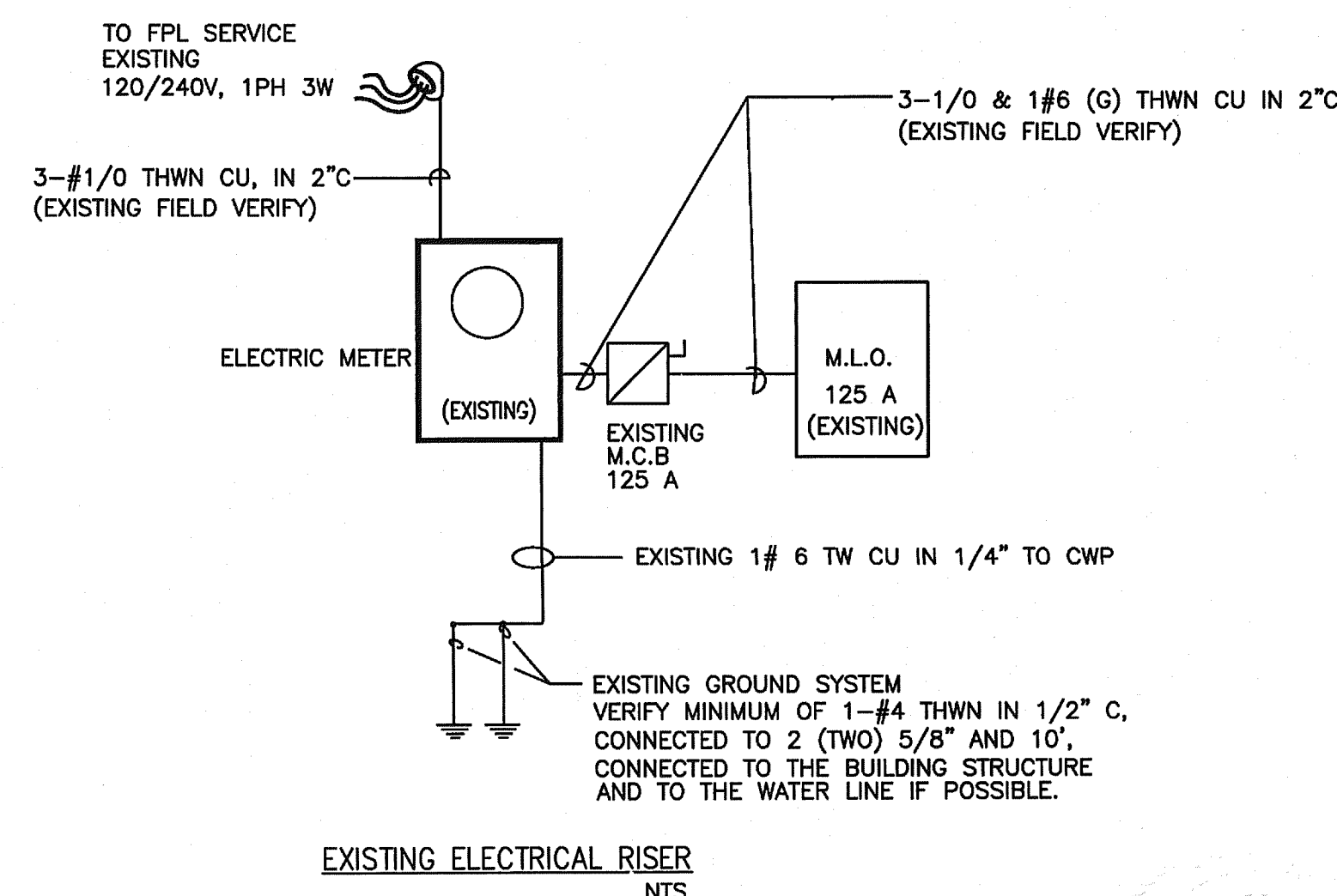
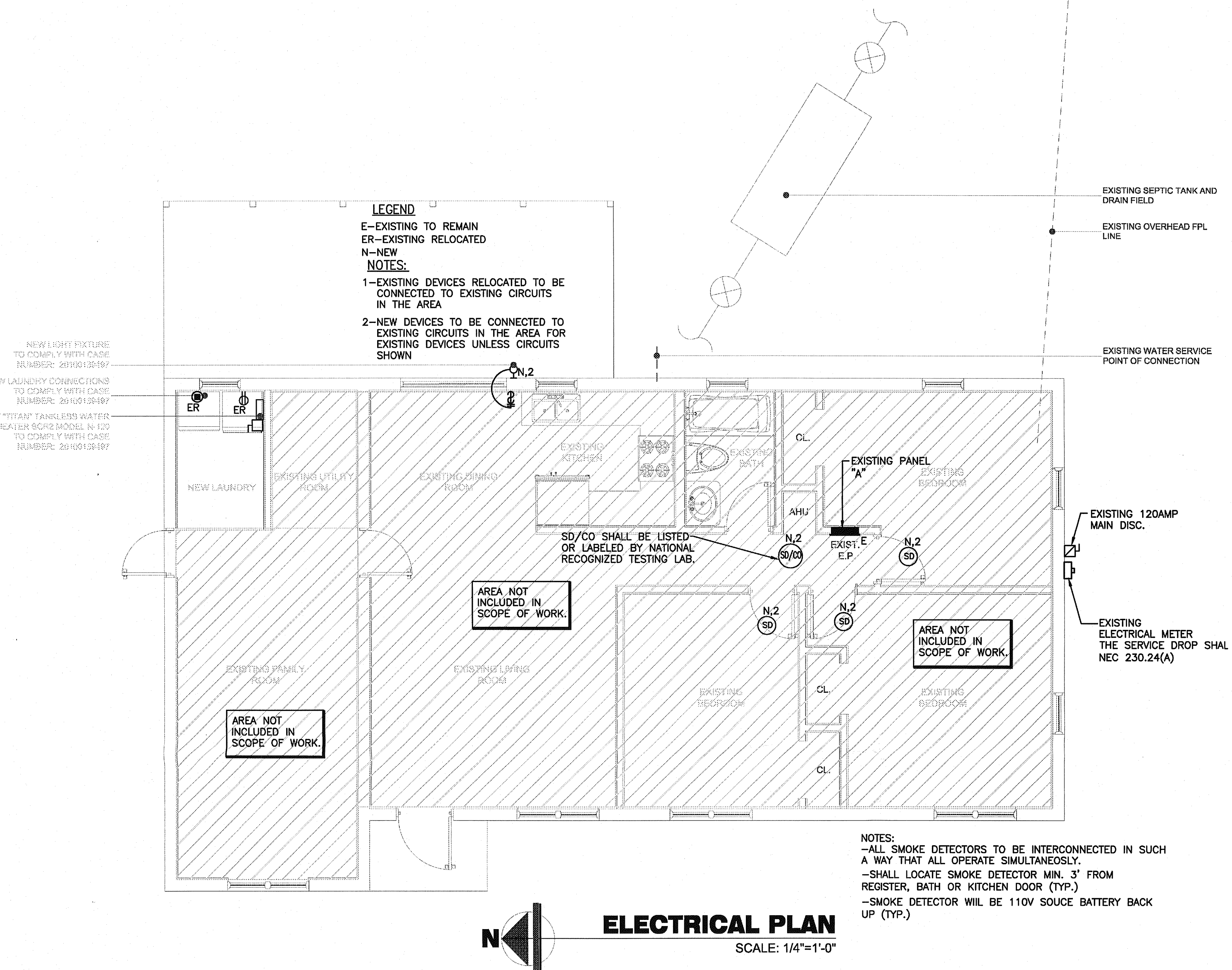
TOTAL GENERAL LOAD-A/C1 = 39,736 VA

TOTAL 10,000 VA AT 100% = 10,000 VA

REMAINDER AT 40% = 11,894 VA

TOTAL DEMAND LOAD = 27,994 VA

TOTAL DEMAND AMPS = 117 AMPS



**PROJECT:**

**OWNER:**  
**JORGE LUIS REYES**  
**3535 SW 105 AVENUE**  
**MIAMI, FL 33165**

**PROJECT:**  
**REYES RESIDENCE**  
**CODE COMPLIANCE**  
**3535 SW 105 AVENUE**  
**MIAMI, FL 33165**

**MANAGEMENT:**

[illegible]

DATE: SEPTEMBER 21, 2010

PROJECT No. : 031-10

DRAWN BY: S.L.P.

CHECKED BY: S.I.P.

**SHEET TITLE:**

# ELECTRICAL PLAN

SHEET No:

E-1

Miami-Dade County Building Department  
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<u>Examiner</u>	<u>Date/Time Stamp</u>	<u>Disp.</u>	<u>Trade</u>	<u>Stamp Name</u>
Stephen Kovach	9/30/2010 4:09:47 PM	A	ELEC	Approved

NOTE: (F.B.C. 109.3.6.4.4) "TO THE BEST OF THE ARCHITECT'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633 OF THE FLORIDA STATUTES."

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